

## APPENDIX E

### TREATMENT DESCRIPTIONS

This appendix has two parts: E.1 displays the fuel reduction treatments and E.2 displays the restoration activities. Modifications from Alternative E as described in the FEIS are in **bold text**.

#### ***E.1 FUEL REDUCTION TREATMENTS***

Unit by unit treatment descriptions of fuel reduction activities described in the following section of this appendix. Guidelines for coarse woody debris, snag and green tree retention would be followed within each unit as **described in Appendix A of the ROD**. Treatments of activity-generated-fuels (woody material including limbs and tops left after treatment) are also described. These silvicultural prescriptions and activity-generated-fuels treatments provide a mechanism to reduce forest fuels (ladder fuels) and tree densities in the Red River watershed. Treatments would remove dead or green trees that could contribute to higher fire intensity and severity of a future wildfire.

**Clearcut.** For the purpose of this project, the term clearcut implies removal of up to 90% of the tree canopy in a stand (the amount of ground covered by the tree crown). This differs from the conventional definition of harvesting all trees at one time. The area harvested may be a patch, stand, or strip large enough to be mapped or recorded as a separate age class in planning. Retained trees within a clearcut area will be a combination of individual trees, in clumps or patches (**ROD Appendix A**). Tree regeneration is obtained through natural seeding, through planting, or by direct seeding. Within areas proposed for clearcut treatment approximately 75% of the trees that will be removed are currently dead.

**Shelterwood or Irregular Shelterwood.** For the purpose of this project, a shelterwood or irregular shelterwood cut is a treatment that removes up to 60% of the tree canopy in a stand. Tree canopy includes overstory and understory trees (dead or green). Up to 50% of the overstory tree canopy would be retained within a unit to provide shade and for other resource benefits. Trees retained include medium to large diameter trees (14 inches Dbh, or larger). This differs from the conventional definition of shelterwood cut which is the removal of a stand of trees through a series of cuttings designed to establish a new crop with seed and protection provided by a portion of the stand. For this proposal, a shelterwood cut is a single cut (entry) to reduce ladder fuels, allow natural regeneration (no planting), and provide protection by retained larger trees. An irregular shelterwood cut would retain more trees and have a patchy or irregular distribution and density of residual trees.

**Precommercial thinning.** The selective felling, deadening, or removal of trees in a young stand of trees primarily to accelerate diameter increment on the remaining stems, maintain a specific stocking range or reduce stand density, and improve the vigor and quality of the trees that remain. This treatment would retain approximately 400 to 600 trees per acre (most desirable species, ~10x10 foot spacing), and other trees would be cut and left in place. Trees cut will be young green trees that are approximately 10-15 years old (sapling to pole size, up to 8 inches Dbh).

**Excavator pile (activity-generated fuels treatment).** Excavator piling is a type of mechanical piling of vegetation as a fuel treatment. This would normally be accomplished on slopes less than 35%. Piles would subsequently be burned to reduce fuels.

**Underburn (activity-generated fuels treatment).** A type of broadcast burn designed to reduce fuel accumulations beneath an overstory tree canopy (natural stand, shelterwood, seed tree), and be designed to prepare the area for future tree regeneration (natural seeding or planted).

**Broadcast Burn (activity-generated fuels treatment).** Within a defined boundary, allowing a controlled fire to burn. The purpose is to reduce fuel accumulations, or as part of a silvicultural treatment, or both, and be designed to prepare the area for future tree regeneration (natural seeding or planted).

## Red Pines EIS – Record of Decision – Appendix E – Treatment Descriptions

Table R-18 display the silvicultural treatment, harvest system, activity-generated fuels treatment, unit acres and percent canopy removal by unit for Alternative E - Modified. Modifications from Alternative E as described in the FEIS are in **bold text**.

**Table R-18 Fuel Reduction Treatments**

Unit	Silvicultural Treatment	Harvest System	Activity-Generated Fuels Treatment	Acres	% Canopy Removal
1	Irregular Shelterwood	Skyline	Underburn	4	60
2	Irregular Shelterwood	Skyline	Underburn	21	60
3	Irregular Shelterwood	Skyline	Underburn	98	50
4	Irregular Shelterwood	Tractor	Ex. Pile	12	50
5	Irregular Shelterwood	Skyline	Underburn	4	50
6	Irregular Shelterwood	Skyline	Underburn	12	60
7	Irregular Shelterwood	Skyline	Underburn	24	60
8	Irregular Shelterwood	Skyline	Underburn	40	60
9	Irregular Shelterwood	Skyline	Underburn	4	50
10	Irregular Shelterwood	Skyline	Underburn	5	50
11	Clearcut	Tractor	Ex. Pile	18	90
12	Clearcut	Skyline	Broadcast	66	90
13	Clearcut	Skyline	Broadcast	37	90
15	Irregular Shelterwood	Tractor	Ex. Pile	16	60
16	Precommercial Thin	Hand	Handpile	18	10
17	Precommercial Thin	Hand	Handpile	10	10
22	Shelterwood	Skyline	Underburn	35	60
24	Irregular Shelterwood	Skyline	Underburn	17	50
26	Clearcut	Skyline	Broadcast	17	60
27	Shelterwood	Skyline	Underburn	39	60
28	Shelterwood	Skyline	Underburn	2	60
29	Shelterwood	Skyline	Underburn	12	60
30	Shelterwood	Skyline	Underburn	3	60
31	Precommercial Thin	Hand	Handpile	14	10
32	Clearcut	Tractor	Ex. Pile	33	90
33	Clearcut	Skyline	Broadcast	15	90
35	Irregular Shelterwood	Skyline	Underburn	5	50
36	Irregular Shelterwood	Tractor	Ex. Pile	9	50
37	Irregular Shelterwood	Tractor	Underburn	7	50
38	Irregular Shelterwood	Skyline	Underburn	11	50
41	Shelterwood	Tractor	Ex. Pile	18	60
42	Shelterwood	Skyline	Underburn	9	60
43	Shelterwood	Tractor	Ex. Pile	5	60
44	Shelterwood	Tractor	Ex. Pile	13	60
45	Clearcut	Tractor	Ex. Pile	53	90
46	Shelterwood	Skyline	Underburn	166	60
48	Shelterwood	Skyline	Underburn	4	60
49	Clearcut	Skyline	Broadcast	32	90
50	Clearcut	Skyline	Broadcast	9	90
51	Clearcut	Skyline	Broadcast	25	90
52	Clearcut	Tractor	Ex. Pile	25	90

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<b>Unit</b>	<b>Silvicultural Treatment</b>	<b>Harvest System</b>	<b>Activity-Generated Fuels Treatment</b>	<b>Acres</b>	<b>% Canopy Removal</b>
53	Clearcut	Skyline	Broadcast	26	90
54	Shelterwood	Skyline	Underburn	3	60
55	Shelterwood	Skyline	Underburn	19	60
56	Shelterwood	Skyline	Underburn	6	60
57	Shelterwood	Skyline	Underburn	11	60
58	Shelterwood	Skyline	Underburn	38	60
59	Shelterwood	Skyline	Underburn	10	60
60	Shelterwood	Skyline	Underburn	13	60
61	Shelterwood	Tractor	Ex. Pile	19	60
62	Shelterwood	Skyline	Underburn	<b>54.5</b>	60
70	Shelterwood	Tractor	Ex. Pile	161	60
72	Clearcut	Tractor	Ex. Pile	12	90
74	Shelterwood	Tractor	Ex. Pile	14	60
75	Shelterwood	Skyline	Underburn	72	70
77	Clearcut	Tractor	Ex. Pile	76	90
78	Clearcut	Tractor	Ex. Pile	29	90
79	Irregular Shelterwood	Skyline	Underburn	84	60
80	Shelterwood	Tractor	Ex. Pile	83	80
81	Shelterwood	Tractor	Ex. Pile	10	50
82	Irregular Shelterwood	Skyline	Underburn	26	50
83	Irregular Shelterwood	Skyline	Underburn	0.1	50
84	Clearcut	Tractor	Ex. Pile	122	90
85	Irregular Shelterwood	Skyline	Underburn	38	50
89	Clearcut	Tractor	Ex. Pile	100	90
90	Shelterwood	Skyline	Underburn	20	60
91	Shelterwood	Tractor	Ex. Pile	14	60
92	Shelterwood	Tractor	Ex. Pile	13	90
93	Irregular Shelterwood	Tractor	Ex. Pile	8	35
94	Clearcut w/Reserves	Tractor	Ex. Pile	16	90
95	Clearcut w/Reserves	Skyline	Underburn	30	90
96	Irregular Shelterwood	Skyline	Underburn	6	50
97	Clearcut w/Reserves	Tractor	Ex. Pile	23	90
98	Irregular Shelterwood	Tractor	Ex. Pile	18	50
99	Clearcut w/Reserves	Tractor	Ex. Pile	23	90
100	Clearcut w/Reserves	Skyline	Underburn	3	90
103	Clearcut w/Reserves	Tractor	Ex. Pile	19	90
104	Clearcut w/Reserves	Tractor	Ex. Pile	5	90
105	Clearcut w/Reserves	Skyline	Underburn	8	90
106	Irregular Shelterwood	Tractor	Ex. Pile	9	40
107	Irregular Shelterwood	Skyline	Underburn	36	35
108	Irregular Shelterwood	Skyline	Underburn	45	35
109	Irregular Shelterwood	Skyline	Underburn	3	50
111	Irregular Shelterwood	Skyline	Broadcast	11	60
112	Irregular Shelterwood	Tractor	Ex. Pile	23	60
113	Irregular Shelterwood	Tractor	Ex. Pile	9	50
114	Clearcut w/Reserves	Tractor	Ex. Pile	4	90

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<b>Unit</b>	<b>Silvicultural Treatment</b>	<b>Harvest System</b>	<b>Activity-Generated Fuels Treatment</b>	<b>Acres</b>	<b>% Canopy Removal</b>
115	Clearcut w/Reserves	Tractor	Ex. Pile	6	90
116	Irregular Shelterwood	Skyline	Underburn	18	50
117	Irregular Shelterwood	Tractor	Ex. Pile	14	50
118	Clearcut w/Reserves	Tractor	Ex. Pile	11	90
119	Clearcut w/Reserves	Tractor	Ex. Pile	20	90
120	Irregular Shelterwood	Skyline	Underburn	8	35
121	Clearcut w/Reserves	Tractor	Ex. Pile	18	90
123	Clearcut w/Reserves	Skyline	Underburn	11	60
124	Irregular Shelterwood	Tractor	Ex. Pile	6	35
125	Clearcut w/Reserves	Skyline	Underburn	22	90
127	Clearcut w/Reserves	Tractor	Ex. Pile	15	90
128	Irregular Shelterwood	Tractor	Ex. Pile	20	35
129	Clearcut w/Reserves	Tractor	Underburn	13	90
131	Irregular Shelterwood	Tractor	Ex. Pile	21	50
132	Irregular Shelterwood	Tractor	Ex. Pile	5	90
133	Clearcut w/Reserves	Tractor	Ex. Pile	7	90
134	Clearcut w/Reserves	Tractor	Ex. Pile	18	90
135	Irregular Shelterwood	Skyline	Underburn	<b>22.2</b>	50
137	Irregular Shelterwood	Skyline	Underburn	16	50
138	Irregular Shelterwood	Tractor	Ex. Pile	5	50
139	Irregular Shelterwood	Tractor	Ex. Pile	11	50
141	Clearcut w/Reserves	Tractor	Ex. Pile	54	90
142	Clearcut w/Reserves	Tractor	Underburn	9	90
143	Irregular Shelterwood	Tractor	Ex. Pile	21	35
144	Clearcut w/Reserves	Tractor	Ex. Pile	20	90
145	Clearcut w/Reserves	Tractor	Ex. Pile	6	90
146	Irregular Shelterwood	Tractor	Ex. Pile	11	35
147	Irregular Shelterwood	Tractor	Ex. Pile	11	50
148	Irregular Shelterwood	Skyline	Underburn	5	50
149	Irregular Shelterwood	Tractor	Ex. Pile	33	60
150	Irregular Shelterwood	Tractor	Underburn	10	60
151	Irregular Shelterwood	Skyline	Underburn	10	35
152	Clearcut w/Reserves	Skyline	Underburn	14	60
153	Clearcut w/Reserves	Skyline	Underburn	41	90
154	Clearcut w/Reserves	Tractor	Ex. Pile	48	90
155	Clearcut w/Reserves	Skyline	Underburn	25	90
156	Clearcut w/Reserves	Tractor	Underburn	32	90
157	Clearcut w/Reserves	Skyline	Underburn	53	90
158	Clearcut w/Reserves	Skyline	Underburn	24	90
159	Clearcut w/Reserves	Tractor	Ex. Pile	17	90
160	Clearcut w/Reserves	Skyline	Underburn	24	90
161	Irregular Shelterwood	Skyline	Underburn	21	50
162	Clearcut w/Reserves	Skyline	Underburn	16	90
163	Clearcut w/Reserves	Skyline	Underburn	44	90
164	Clearcut w/Reserves	Tractor	Ex. Pile	9	90
165	Irregular Shelterwood	Skyline	Underburn	32	50

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<b>Unit</b>	<b>Silvicultural Treatment</b>	<b>Harvest System</b>	<b>Activity-Generated Fuels Treatment</b>	<b>Acres</b>	<b>% Canopy Removal</b>
166	Clearcut w/Reserves	Tractor	Ex. Pile	18	90
167	Clearcut w/Reserves	Skyline	Underburn	25	90
168	Clearcut w/Reserves	Tractor	Ex. Pile	26	90
169	Clearcut w/Reserves	Skyline	Underburn	17	50
170	Irregular Shelterwood	Skyline	Underburn	3	35
171	Clearcut w/Reserves	Tractor	Ex. Pile	1	90
172	Clearcut w/Reserves	Skyline	Underburn	24	90
173	Irregular Shelterwood	Tractor	Underburn	19	35
174	Clearcut w/Reserves	Tractor	Underburn	16	90
176	Clearcut w/Reserves	Tractor	Ex. Pile	9	90
177	Irregular Shelterwood	Tractor	Ex. Pile	5	50
178	Irregular Shelterwood	Skyline	Underburn	42	35
179	Irregular Shelterwood	Tractor	Ex. Pile	4	50
180	Irregular Shelterwood	Tractor	Ex. Pile	2	50
181	Clearcut w/Reserves	Skyline	Underburn	1	90
183	Irregular Shelterwood	Tractor	Ex. Pile	21	10
184	Irregular Shelterwood	Tractor	Ex. Pile	1	35
185	Irregular Shelterwood	Tractor	Ex. Pile	3	80
<b>Total Acres Fuel Reduction Treatment - Alternative E-modified</b>				<b>3453.8</b>	

## E.2 RESTORATION ACTIVITIES BY SUBWATERSHED

This section displays, by subwatershed, the activities with Alternative E-modified. Modifications from Alternative E as described in the FEIS are in **bold text**. Those fields in italic print indicate potential change from abandon to recontour due to soil restoration needs. Additional field reviews **would be completed** to prepare final design and contract package to implement projects.

Alternative E-Modified Project Type: **P = Planned & Required**, D = Discretionary.

### DAWSON CREEK – 170603050401

#### Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
1800E1	1.10	Moderate	None	Recontour	P
1800F1	0.09	Low	None	Recontour	P
1800G2	0.56	High	2133	Recontour	P
1800H1	0.03	Low	None	<i>Recontour</i>	P
1800W	1.01	High	2222	Recondition/Recontour	P
77172	0.22	Low	None	<i>Recontour</i>	P
77173	0.55	Low	None	<i>Recontour</i>	P
77174	0.41	Low	None	<i>Recontour</i>	P
77175	0.24	Low	2515, 2216	Abandon	P
77176	0.57	Low	None	Abandon	P
77176A	0.24	High	None	Recontour	P
77177	0.30	High	None	Abandon	P
77177A	0.20	High	None	Abandon	P
77178	0.62	High	None	Abandon	P
77180	0.10	High	None	Recontour	P
77181	0.14	High	None	<i>Recontour</i>	P
77182	0.58	High	None	Convert to Trail	P
77183	0.45	High	None	<i>Recontour</i>	P
77183A	0.02	High	None	<i>Recontour</i>	P
77184	0.39	High	None	<i>Recontour</i>	P
Total	7.82				

#### Stream Crossing Improvements

Road Number	Crossing Number	Implementation Priority	Issue	Alt E - Modified	Stream
1800	2121	Low	Fish Passage Barrier	D	Dawson Creek
1800	2131	Low	Fish Passage Barrier	D	Dawson Creek
1800G	2100	Low	Fish Passage Barrier	D	Dawson Creek
1800G1	2104	High	Log Bridge Removal	P	Dawson Creek
1800G	2132	Low	Partial Fish Passage Barrier	D	Dawson Creek

#### Improvement Projects

Project Name	Implementation Priority	Alt E - Modified	Stream
Dawson Creek sediment trap – 1 ac.– remove – collaboration with private landowners required	Low	D	Dawson Creek

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### LOWER MAIN RED RIVER – 170603050402

#### Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
1151B	0.45	Low	None	Recontour	P
1183C	0.53	High	2176, 2191	Recondition/Recontour	P
1800A1	0.28	High	1969	Recontour	P
1800A2	0.59	High	1761	Recontour	P
1800B	0.62	Low	None	Recontour	P
1800C1	0.59	High	None	Recondition/Recontour	P
1800C2	0.31	High	1980	Recontour	P
1800D1	0.18	Low	None	Recondition/Recontour	P
1800E1	0.06	Moderate	None	Recontour	P
1800K	0.12	Low	None	Recontour	P
1800L	0.21	Low	None	Recontour	P
1806B1	0.43	Low	2053	Recontour	P
1806C	3.90	High	1913, 1941	Recontour from Loon Creek to terminus	P
1806C1	1.34	High	None	Recondition/Recontour	P
9501	0.33	Low	None	Recontour	P
9506	0.36	High	None	Recontour	P
9514	0.03	High	None	Recondition/Recontour	P
9514A	0.09	High	None	Recontour	P
9517A	0.29	Moderate	None	Recondition/Recontour	P
9517A1	0.35	Low	None	Abandon	P
9519A	0.22	High	None	Recontour	P
9533A	0.16	Low	None	Recontour	P
9533B	0.01	Moderate	None	Recontour	P
77162	0.18	Low	None	Recontour	P
77163	1.01	Moderate	None	Recontour	P
77164	0.37	Low	None	Recontour	P
77165	0.42	Low	None	Recontour	P
77165A	0.24	Low	None	Recontour	P
77167	0.18	Low	None	Recontour	P
77168	0.23	Low	None	Recontour	P
77169	0.23	Low	None	Recontour	P
77170	0.10	Low	None	Recontour	P
77171	0.10	Low	None	Recontour	P
77217	0.62	High	1880	Recontour	P
77218	0.33	High	1882	Recontour	P
77219	0.41	Moderate	None	Recontour	P
77222	0.15	Low	None	Recontour	P
77223	0.23	Low	None	Recontour	P
77224	0.39	Low	None	Recontour	P
77225	0.22	High	2166	Recondition/Recontour	P
77242	0.34	Low	None	Abandon	P
77289	0.77	Moderate	None	Recondition/Recontour	P
77310	0.44	Low	None	Recontour	P
77332	0.44	Low	None	Recontour	P
78496D	0.06	High	None	Recontour	P
Total	18.76				

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### Stream Crossing Improvements

Road Number	Cross ing Number	Implementation Priority	Issue	Alt E - Modified	Stream
1800A3	1876	High	Log Culvert – remove	P	Cole Creek
1800C	1956	High	Log Culvert – remove	P	Sixty-six Creek
1800A	1870	High	Log Culvert – remove	P	Cole Creek
1800C2	1980	High	Log Culvert – remove	P	Sixty-six Creek
1806C	1913	High	Log Culvert – remove	P	Galena Creek
1806C	1941	High	Log Culvert – remove	P	Galena Creek
1800	1986	Low	Fish Passage Barrier	D	Sixty-six Creek
222	2052	Moderate	Fish Passage Barrier, County	D	Cartwright Creek
222	2095	Moderate	Fish Passage Barrier, County	D	Unnamed Tributary to Red River
222	2188	High	Fish Passage Barrier, County	D	Unnamed Tributary to Red River

### Improvement projects

Project Name	Implementation Priority	Alt E - Modified	Stream
Fencing mainstem Red River from grazing impacts – 8.0 miles – collaboration with private landowners	High	D	Red River
Fencing mainstem Red River from grazing impacts – 2.0 miles	High	P	Red River
Large Woody Debris placement in-channel – 1.0 mile	High	P	Red River
In-stream dredge mining restoration – 2.00 miles – The Narrows project – see AML Project Report 2005	High	P	Red River
Riparian restoration – The Narrow project – hardening of dispersed campsites, riparian plantings, and closure of non-system existing roads in riparian area and upgrade and maintain one access road to campsites.	High	P	Red River
Riparian restoration – native species plantings – 10.0 stream miles – collaboration with private landowners (It must be noted that recent developments have caused the Soil Conservation District to drop the previously proposed restoration project of Main Red River on the privately owned segments adjacent to the Wildlife Management Area. For the purposes of this document it was decided to leave the proposed restoration work in as it was felt that possible funds may become available and private landowners may agree to collaboration on this work.)	High	D	Red River



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**SIEGEL CREEK – 170603050403**

## Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
9818A	0.20	High	None	Recontour	P
77207	0.04	Low	None	Recontour	P
Total	0.24				

## Stream Crossing Improvements

Road Number	Crossing Number	Implementation Priority	Issue	Alt E - Modified	Stream
1182	1664	High	Fish Passage and Hydraulic	P	Boyer Creek
1182	1662	Moderate	Culvert Upgrade (Private Prop)	D	Siegel Creek
1182A	1598	High	Failed Log Bridge	P	Unnamed Tributary to Siegel Creek
1182C	1634	Moderate	Upgrade Snowmobile Log Bridge	P	Boyer Creek
Private	Private	High	Possible Fish Passage Barrier	D	Little Siegel Creek
1182A	1606	High	Failed Log Bridge	P	Siegel Creek

## Improvement projects

Project Name	Implementation Priority	Alt E - Modified	Stream
Watershed road recondition on FS roads 1182, 1182A, and 1182C. 6.24 total miles of recondition	High	P	Siegel Creek
6 hardrock mine sites – restoration includes gates/closures to open adits, plantings of native grasses/shrub/trees to waste dumps/review of water quality - ~4.5 acres	High	P	Siegel
Large Woody Debris placement – 3.0 miles on lower stretch of Siegel Creek	High	P	Siegel Creek

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### DITCH CREEK – 170603050404

#### Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
234D1	0.09	High	None	Convert to Trail	P
1183	1.50	Moderate	None	Recontour from 7.00 mm to terminus	P
1183A	0.40	Moderate	None	Recontour	P
1183E	<b>0.50</b>	High	1842	Recontour	P
9516A	0.24	Low	None	Recontour	P
9518B	0.19	High	None	Recontour	P
77207	0.46	Moderate	None	Recontour	P
<b>77210</b>	<b>0.65</b>	<b>Moderate</b>	<b>None</b>	<b>Recontour</b>	<b>P</b>
77210A	0.42	Low	None	Recontour	P
77212A	0.04	Low	None	Recontour	P
77213	1.03	High	None	Recontour	P
77291	0.30	Low	None	Recontour	P
Total	<b>5.82</b>				

#### Improvement projects

Project Name	Implementation Priority	Alt E - Modified	Stream
5 hardrock mine sites – restoration includes gates/closures to open adits, plantings of native grasses/shrub/trees to waste dumps/review of water quality - ~3.6 acres	Moderate	P	Ditch Creek
Ditch Creek Campground restoration – planting native species – 5.0 acres	Moderate	P	Ditch Creek

### TRAIL CREEK – 170603050405

#### Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
423D	0.84	Moderate	None	Recontour	P
423E	0.53	High	None	Recondition/Recontour	P
77209	0.30	Moderate	None	Recontour	P
77221	0.85	Moderate	None	Recontour	P
77221A	0.13	Moderate	None	Recontour	P
77320	0.20	Moderate	None	Recontour	P
Total	<b>2.85</b>				

#### Stream Crossing Improvements

Road Number	Crossing Number	Implementation Priority	Issue	Alt E - Modified	Stream
423C	1585	Moderate	Log culvert – remove	D	Trail Creek
423C	1594	Moderate	Log culvert - remove	D	Trail Creek

### BASTON CREEK – 170603050409

#### Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
77265	0.13	High	None	Recontour	P
Total	<b>0.13</b>				

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### SODA CREEK – 170603050410

#### Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
1172E	0.51	High	None	Recontour	P
1172F	1.38	High	2030, 2049, 2058, 2075, 2103, 2123	Recondition/ Recontour	P
77230	0.19	Moderate	None	Recontour	P
77231	0.47	Moderate	None	Recontour	P
77335	0.10	Moderate	None	Recontour	P
77336	0.18	Moderate	None	Recontour	P
9507	0.44	Moderate	None	Recontour	P
9541A	0.49	Moderate	None	Recontour	P
9541B	0.61	Moderate	None	Recontour	P
9541D	0.35	Moderate	None	Recontour	P
Total	4.72				

#### Stream Crossing Improvements

Road Number	Crossing Number	Implementation Priority	Issue	Alt E - Modified	Stream
1172	1930	High	Fish Passage Barrier	P	Soda Creek
1172	2033	High	Fish Passage Barrier	P	Soda Creek
1172	2076	High	Fish Passage Barrier	P	Soda Creek
1172	2110	High	Fish Passage Barrier	P	Soda Creek
1172	2172	High	Fish Passage Barrier	P	Soda Creek
1172	2175	High	Fish Passage Barrier	P	Soda Creek
9542	2209	Moderate	Fish Passage Barrier	P	Soda Creek
9542	2180	Moderate	Fish Passage Barrier	P	Soda Creek
9524	2171	Moderate	Fish Passage Barrier	P	Soda Creek
9542	2115	Moderate	Fish Passage Barrier	P	Soda Creek
1172F	2030	High	Log culvert - remove	P	Soda Creek
1172F	2075	High	Log culvert - remove	P	Soda Creek
9507A	2091	High	Log culvert - remove	P	Soda Creek
9507	2101	Moderate	Log culvert - remove	P	Soda Creek
9507	2123	Moderate	Log culvert - remove	P	Soda Creek

## Red Pines EIS – Record of Decision – Appendix E – Treatment Descriptions

### MAIN RED RIVER – 170603050411

#### Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
1172A	0.85	Moderate	2312	Recondition/Recontour	P
1172B	0.55	Low	None	Recontour	P
1172D	0.90	Low	None	Recontour	P
1172F	1.13	High	2041	Recontour	P
1184	1.59	High	2014	Recontour	P
1184A	0.51	High	None	Recontour	P
9515A	0.57	High	None	Abandon	P
9516A	0.13	Low	None	Recontour	P
9519A	0.45	High	2263	Recontour	P
9541C	0.36	Moderate	None	Recontour	P
77227	0.53	Low	None	Recontour	P
77228	0.13	Low	None	Recondition/Recontour	P
77234	0.16	High	None	Abandon	P
77235	0.38	High	None	Abandon	P
77235A	0.15	High	None	Abandon	P
77236	0.11	Low	None	Recontour	P
77237	0.89	High	2247, 2251	Abandon	P
77238	0.70	Moderate	None	Recontour	P
77238A	0.45	High	None	Abandon	P
77238A1	0.30	High	None	Abandon	P
77239	0.60	Low	None	Recontour	P
77239A	0.19	High	None	Abandon	P
77241	0.32	High	None	Recondition/Recontour	P
77264	0.41	High	None	Recontour	P
77264A	0.17	High	None	Recontour	P
77264B	0.25	High	None	Recontour	P
77265	0.06	High	None	Abandon	P
77269	0.14	Low	None	Recontour	P
77289	0.03	Moderate	None	Recondition/Recontour	P
77333A	0.39	Moderate	None	Recontour	P
77334	0.47	High	None	Recontour	P
77335	0.13	Moderate	None	Recontour	P
Total	14.0				

#### Stream Crossing Improvements

Road Number	Crossing Number	Implementation Priority	Issue	Alt E - Modified	Stream
1132	2073	High	Log culvert-remove	P	Baston Creek
234	2158	High	Fish passage-barrier	D	Unnamed Tributary to Red River

## Red Pines EIS – Record of Decision – Appendix E – Treatment Descriptions

### Improvement projects

Project Name	Type	Alt E - Modified	Stream
Large Woody Debris placement – 10.0 miles – in-channel	High	P	Red River
In-stream enhancement structures – 6.0 miles - evaluate and maintain/upgrade as needed	High	P	Red River
2 hardrock mine sites – restoration includes gates/closures to open adits, plantings of native grasses/shrub/trees to waste dumps/review of water quality - ~2.0 acres	High	P	Steckner Creek
Riparian restoration –6.0 miles – plant native species	High	P	Red River
Red River Campground riparian restoration – 10.0 acres – plant native species	High	P	Red River
Rock pit restoration – 5.0 acres – on 234 road	High	P	Red River

### SCHOONER CREEK – 170603050412

#### Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
468N	0.08	Low	None	Recontour	P
468V	0.12	Low	None	Recontour	P
468X	0.43	Low	None	Recontour	P
468Y	0.27	Low	None	Recontour	P
77241	0.31	Low	None	Recondition/Recontour	P
77277	0.16	Low	None	Recontour	P
Total	1.37				

#### Stream Crossing Improvements

Road Number	Crossing Number	Implementation Priority	Issue	Alt E - Modified	Stream
222	2347	High	Fish passage barrier	D	Schooner Creek

### Improvement projects

Project Name	Type	Alt E - Modified	Stream
Large Woody Debris placement – 1.0 mile – in-channel	High	P	Schooner Creek
Riparian restoration 1.08 mile – plant native species	High	P	Red River
Sediment trap removal – 1 site – 2 acres	High	P	Schooner Creek

### TRAPPER CREEK – 170603050413

#### Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
1190M	0.17	High	None	Recontour	P
1190N	0.08	High	None	Recontour	P
468D	0.35	High	None	Recontour	P
9550B	0.59	High	None	Recontour	P
9551	0.81	High	2479	Recontour	P
Total	2.01				

## Red Pines EIS – Record of Decision – Appendix E – Treatment Descriptions

### PAT BRENNAN CREEK – 170603050414

#### Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
1190M	0.15	High	None	Recontour	P
1190N	0.27	High	None	Recontour	P
77247	0.25	High	None	Recontour	P
77248	0.07	High	None	Recontour	P
9509	1.35	High	None	Recontour	P
9551	0.82	High	None	Recontour	P
Total	2.11				

### LOWER SOUTH FORK RED RIVER – 170603050415

#### Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
1194B1	0.39	High	None	Recontour	P
1196D	0.94	High	None	Recontour	P
77201	0.69	High	None	Recontour	P
77204	0.10	High	None	Recontour	P
77205	0.04	High	None	Recontour	P
77206	0.26	High	None	Recontour	P
77241	0.68	High	None	Recondition/Recontour	P
77244	0.32	High	None	Recontour	P
77247	0.05	High	None	Recontour	P
77248	0.09	High	None	Recontour	P
Total	3.55				

#### Stream Crossing Improvements

Road Number	Crossing Number	Implementation Priority	Issue	Alt E - Modified	Stream
1195	2459	High	Fish passage barrier	P	Deer Creek
222	2458	Low	Fish passage barrier	D	Deer Creek

#### Improvement projects

Project Name	Type	Alt E - Modified	Stream
Large Woody Debris placement – 2.0 miles – in-channel	High	P	S Fork Red River
Riparian restoration –1.0 mile – plant native species	High	P	S Fork Red River

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**Red Pines EIS – Record of Decision – Appendix E – Treatment Descriptions**

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**UPPER SOUTH FORK RED RIVER – 170603050416**

## Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
1194A1	0.41	High	None	Recontour	P
77202	0.27	High	None	Recontour	P
77203	0.11	High	None	Recontour	P
9502B	0.17	High	None	Recontour	P
9525	0.80	High	None	Recontour	P
9526	2.40	High	None	Recontour	P
9526B	0.53	High	None	Recontour	P
Total	4.69				

## Stream Crossing Improvements

Road Number	Crossing Number	Implementation Priority	Issue	Alt E - Modified	Stream
222	2711	High	Fish passage barrier	D	South Fork Red River

**MIDDLE FORK RED RIVER – 170603050417**

## Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
77202	0.17	High	None	Recontour	P
9526B	0.36	High	None	Recontour	P
Total	0.53				

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**Red Pines EIS – Record of Decision – Appendix E – Treatment Descriptions**

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**MOOSE BUTTE CREEK – 170603050419**

## Decommissioned Roads

Road Number	Miles	Implementation Priority	Stream Crossings	Decommission Level	Alt E - Modified
1151B	0.10	High	None	Recontour	P
1196D	0.14	High	None	Recontour	P
77244	0.03	High	None	Recontour	P
Total	0.26				

## Stream Crossing Improvements

Road Number	Crossing Number	Implementation Priority	Issue	Alt E - Modified	Stream
1151	2358	High	Fish passage- barrier	P	Moose Butte Creek
1150B	2363	High	Log culvert-remove	P	Ryan Creek
1196	2376	High	Fish passage-barrier	P	Moose Butte Creek
1196	2392	High	Log culvert-remove	P	Ryan Creek

## Improvement projects

Project Name	Mitigation Type	Alt E - Modified	Stream
Fencing of stream from grazing impacts – collaboration with private landowners – 1.0mile	High	D	Moose Butte Creek
Large Woody Debris placement – 2.0 miles – in-channel	High	P	Moose Butte Creek
Riparian restoration –2.0 miles – plant native species	High	D	Moose Butte Creek
Sediment trap removal – 2 sites – 4 acres	High	P	Moose Butte Creek
In-stream enhancement structure evaluation – 2.0 mile- evaluate for maintenance/upgrade	High	P	Moose Butte Creek



## Red Pines EIS – Record of Decision – Appendix E – Treatment Descriptions

### LITTLE MOOSE CREEK 170603050420

#### Decommissioned Roads

Road Number	Miles	Mitigation Type	Stream Crossings	Decommission Level	Alt E - Modified
1800H1	0.2	High	None	<i>Recontour</i>	P
9500B	0.32	High	2168	Recontour	P
9500C1	0.32	High	2256, 2257, 2260, 2267, 2282, 2308, 2309	Recontour	P
9506	2.16	High	None	Recontour	P
9511	2.11	High	2276	Recontour	P
9532B1	0.66	High	None	Recontour	P
9532B2	0.55	High	None	Recontour	P
9533B	0.64	High	None	Recontour	P
77183	0.18	High	None	Recontour	P
77183A	0.46	High	None	<i>Recontour</i>	P
77184	0.04	High	None	Recontour	P
77185	0.12	High	None	Recontour	P
77186	0.38	High	None	Recontour	P
77186A	0.09	High	None	Recontour	P
77187	0.59	High	None	Recontour	P
77188	0.15	High	None	Recontour	P
77189	0.14	High	None	Recontour	P
77190	0.56	High	None	Recontour	P
77191	0.50	High	None	Recontour	P
77191A	0.2	High	None	Recontour	P
77192	1.10	High	None	Recontour	P
77287	0.10	High	None	Recontour	P
Total	11.61				

#### Stream Crossing Improvements

Road Number	Crossing Number	Implementation Priority	Issue	Alt E - Modified	Stream
9500	2219	High	Fish passage-barrier	P	Little Moose Butte Creek
9506	2308	High	Log bridge-remove	P	Little Moose Butte Creek
1800	2261	High	Log culvert	P	Little Moose Butte Creek
1800I	2279	High	Fish passage-barrier	P	Little Moose Butte Creek

#### Improvement projects

Project Name	Type	Alt E - Modified	Stream
Large Woody Debris placement – 2.0 miles – in-channel	High	P	Little Moose Butte Creek
Riparian restoration – 2.0 miles – plant native species	High	P	Little Moose Butte Creek
Sediment trap removal – 2 sites – 4 acres	High	P	Little Moose Butte Creek

## Red Pines EIS – Record of Decision – Appendix E – Treatment Descriptions

### BLANCO CREEK – 170603050421

#### Decommissioned Roads

Road Number	Miles	Mitigation Type	Stream Crossings	Decommission Level	Alt E - Modified
77226	0.35	Low	2079	Recontour	P
77310	0.26	High	None	Recontour	P
9504	0.60	High	None	Recontour	P
9514	1.18	High	2161	Recondition/Recontour	P
9514A	0.19	High	None	Recontour	P
9519	1.33	High	None	Recondition/Recontour	P
9519B	0.48	High	None	Recontour	P
Total	4.39				

#### Stream Crossing Improvements

Road Number	Crossing Number	Implementation Priority	Issue	Alt E - Modified	Stream
234	2258	High	Fish passage- barrier	D	Blanco Creek

### DEADWOOD CREEK - 170603050422

#### Decommissioned Roads

Road Number	Miles	Mitigation Type	Stream Crossings	Decommission Level	Alt E - Modified
522K	0.47	High	None	Recontour	P
522K1	0.47	High	None	Recontour	P
1803C	0.29	High	1810	Recontour	P
1803D	0.87	High	None	Recontour	P
78363	0.35	High	None	Recontour	P
78402	0.38	High	None	Recontour	P
78408	0.56	High	None	Recontour	P
78408A	0.11	High	None	Recontour	P
78408B	0.16	High	None	Recontour	P
78409	0.32	High	None	Abandon	P
78410	0.22	High	None	Recontour	P
78411	0.28	High	None	Abandon	P
78412	0.85	High	None	Recontour	P
78412A	0.39	High	None	Recontour	P
78412A1	0.18	High	None	Recontour	P
78412A2	0.13	High	None	Recontour	P
78501	0.16	High	None	Recontour	P
78502	0.34	High	None	Recontour	P
78504	0.09	High	None	Abandon	P
78505	0.31	High	1806	Recontour	P
78505A	0.1	High	None	Recontour	P
78507	0.43	High	1852	Recontour	P
78508	0.25	High	None	Recontour	P
78508A	0.21	High	None	Recontour	P
78509	0.63	High	None	Recontour	P
78509A	0.29	High	None	Recontour	P
78509B	0.13	High	None	Recontour	P
9803B2	0.13	High	None	Recontour	P
Total	9.95				

## Red Pines EIS – Record of Decision – Appendix E – Treatment Descriptions

### Stream Crossing Improvements

Road Number	Crossing Number	Implementation Priority	Issue	Alt E - Modified	Stream
522	1869	High	Artificial debris upstream of culvert removal	P	Unnamed Tributary to Deadwood Creek
522	1921	High	Fish passage-barrier	P	Unnamed Tributary to Deadwood Creek
1803	1706	High	Fish passage-barrier	P	Deadwood Creek

### Improvement projects

Project Name	Type	Alt E - Modified	Stream
Watershed road condition on F S Road 522B – 2.20 miles	High	P	Deadwood Creek
Large Woody Debris placement – 1.0 miles – in-channel	High	P	Deadwood Creek
Riparian restoration –1.0 miles – plant native species	High	P	Deadwood Creek
5 hardrock mine sites – restoration includes gates/closures to open adits, plantings of native grasses/shrub/trees to waste dumps/review of water quality - ~8.0 acres	High	P	Deadwood Creek

### RED HORSE CREEK – 170603050423

#### Stream Crossing Improvements

Road Number	Crossing Number	Implementation Priority	Issue	Alt E - Modified	Stream
1807B	1544	High	Failed log bridge	P	Red Horse Creek

### Improvement projects

Project Name	Type	Alt E - Modified	Stream
1807B Road to trail conversion – 0.43 miles	High	P	Red Horse Creek

### FRENCH GULCH CREEK – 170603050424

#### Decommissioned Roads

Road Number	Miles	Mitigation Type	Stream Crossings	Decommission Level	Alt E - Modified
78560	1.21	High	None	Recontour	P
Total	1.21				

### Improvement projects

Project Name	Type	Alt E - Modified	Stream
Riparian restoration –1.0 mile – plant native species	High	P	French Gulch Creek

## Red Pines EIS – Record of Decision – Appendix E – Treatment Descriptions

### CAMPBELL CREEK - 170603050425

#### Decommissioned Roads

Road Number	Miles	Mitigation Type	Stream Crossings	Decommission Level	Alt E - Modified
522	1.09	High	1618	Recontour	P
Total	1.09				

#### Stream Crossing Improvements

Road Number	Crossing Number	Implementation Priority	Issue	Alt E - Modified	Stream
522	1593	High	Culvert removal – BLM	P	Little Campbell
1803	1591	High	Culvert replacement- BLM	D	Little Campbell
1803	1652	High	Fish passage-barrier	P	Big Campbell

### LOWEST RED RIVER - 170603050426

#### Decommissioned Roads

Road Number	Miles	Mitigation Type	Stream Crossings	Decommission Level	Alt E - Modified
78496	1.72	High	1833	Recontour	P
78496A	0.02	High	None	Recontour	P
78496B	0.05	High	None	Recontour	P
78496C	0.09	High	None	Recontour	P
78496D	0.23	High	None	Recontour	P
78497A	0.17	High	None	Recontour	P
78622	0.61	High	None	Recontour	P
9803B1	1.75	High	None	Recontour	P
9803B2	0.76	High	None	Recontour	P
9803B3	0.92	High	None	Recontour	P
9819A2	0.34	High	None	Recontour	P
Total	6.65				

#### Improvement projects

Project Name	Type	Alt E - Modified	Stream
Large Woody Debris placement – 7.0 miles – in-channel	High	P	Lower Red River
3 hardrock mine sites – restoration includes gates/closures to open adits, plantings of native grasses/shrub/trees to waste dumps/review of water quality - ~3.0 acres	High	P	Lower Red River
Riparian restoration –7.0 miles – plant native species	High	P	Lower Red River